ABSTRACT

Provided are a heat-resistant glass fiber which has excellent heat resistance, which is also easy to spin and less expensive and which is suitable as an acoustic material for use in an automobile muffler, and a process for the production thereof. The heat-resistant glass fiber has a composition comprising, substantially by weight %, 56 to 58.5 % of SiO_2, 12 to 17 % of Al_2O_3, 16 to 27 % of CaO, 1 to 9 % of MgO, 0 to 1 % of Na_2O and 0 to 1 % of K_2O as the entirety of the fiber and containing neither B_2O_3 nor F_2, and has a surface layer portion made of a silicic glass having an SiO_2 content of at least 90 % by weight. The process comprises treating the surface of the above fiber having the above composition with a mineral acid, to produce the heat-resistant glass fiber.